CLAIMS

What is claimed is:

1.   A multimedia data storage medium, comprising:

a first layer storing multimedia data; and

a second layer in which, when the multimedia data is divided into a record unit and a reproduction unit, information of attributes of the record unit and a relationship between the record unit and the reproduction unit are described with a markup language.

2.   The medium of claim 1, wherein the multimedia data recorded on the first layer is video object data, still image data, or audio data.

3.   The medium of claim 1, wherein when the multimedia data is video object data, the multimedia data is coded at a variable bit rate (VBR), and a reproduction time and linkage information of a position of reproduction data are described as temporal and position information, where the reproduction time and the linkage information are in a table format and recorded on the first layer.

4.   The medium of claim 3, wherein the record unit comprises a clip made by linking the video object data to the temporal and position information.

5.   The medium of claim 3, wherein the reproduction unit comprises a cell designating the record unit or a portion of the record unit.

6.   The medium of claim 4, wherein the reproduction unit comprises a cell designating the record unit or a portion of the record unit.

7.   The medium of claim 1, wherein the reproduction unit has a hierarchical structure of at least two layers.

8.   The medium of claim 2, wherein the reproduction unit has a hierarchical structure of at least two layers.

9.   The medium of claim 7, wherein the reproduction unit has two layers comprising a cell, which designates the record unit or a portion of the record unit, and a chapter linked to a plurality of cells.

10.   The medium of claim 9, wherein the reproduction unit has three layers comprising a cell, which designates the record unit or a portion of the record unit,, a chapter, and a title linked to the chapter.

11.   The medium of claim 1, wherein the information described using the markup language comprises a clip, a cell, a chapter, and a title.

12.   The medium of claim 10, wherein the information described using the markup language comprises a clip, the cell, the chapter, and the title.

13.   The medium of claim 1, further comprising:
a third layer storing navigation data, which is used to control a selection of the reproduction unit and reproduction sequence.

14.   The medium of claim 9, further comprising:
a third layer storing navigation data, which is used to control a selection of the reproduction unit and reproduction sequence.

15.   The medium of claim 10, further comprising:
a third layer storing navigation data, which is used to control a selection of the reproduction unit and reproduction sequence.

16.   A multimedia data storage medium, comprising:
a first layer storing multimedia data;
a second layer in which, when the multimedia data is divided into a record unit and a reproduction unit, information of attributes of the record unit and a relationship between the record unit and the reproduction unit are described in a table format; and
a third layer storing navigation data of a selection of the reproduction unit and reproduction sequence.

17. The medium of claim 16, wherein the navigation data stored in the third layer is a script language that is interpreted and executed in units of lines, and controls the selection of the reproduction unit and the reproduction sequence.

18. The medium of claim 16, wherein the navigation data stored in the third layer is a markup language with timing and synchronization functions, and controls the selection of the reproduction unit and the reproduction sequence.

19. The medium of claim 18, wherein presentation data is described with a markup language and stored in the third layer, and comprises information of a layout of a menu screen and a screen structure of the reproduction unit.

20. The medium of claim 18, wherein the navigation data is an interface to select and control the reproduction unit recorded on the second layer.

21. The medium of claim 18, wherein the navigation data comprises information of registration and execution of an event generating specific conditions when the reproduction unit is reproduced.

22. A multimedia reproduction apparatus reproducing data stored in a multimedia data storage medium, comprising a first layer storing multimedia data, and a second layer describing information of attributes of a record unit and a relationship between the record unit and a reproduction unit using a markup language, wherein when the multimedia data is divided into the record unit and the reproduction unit, the information of the record unit and the reproduction unit is read from the second layer, a desired position of the data selected by a user, is detected that corresponds to the record unit, and the data is reproduced at the detected position.

23. The apparatus of claim 22, wherein a menu screen is provided to select the reproduction unit and to reproduce the data of the selected reproduction unit, when the data of the selected reproduction unit is stored by at least two layers.

24. The apparatus of claim 22, wherein navigation information of the selection of the reproduction unit and reproduction sequence is stored on a third layer, and the data of the selected reproduction unit is reproduced based on the navigation information.

25. A multimedia reproduction apparatus reproducing data stored in a multimedia data storage medium, comprising a first layer storing multimedia data, a second layer describing information of attributes of a record unit and a relationship between the record unit and a reproduction unit are stored in a table format when the multimedia data is divided into the record unit and the reproduction unit, and a third layer comprising navigation information of a selection of the reproduction unit and a reproduction sequence, wherein a reproduction of the reproduction unit is based on the navigation information and a user selection.

26. The apparatus of claim 25, wherein when the navigation information recorded on the third layer is described using a script language that is interpreted and executed in units of lines, a navigation is performed by executing the script language, where the navigation information controls a selection of the reproduction unit and the reproduction sequence.

27. The apparatus of claim 25, wherein when the navigation information recorded on the third layer is described using a markup language with timing and synchronization functions, a navigation is performed to carry out the timing and synchronization functions and the navigation information controls a selection of the reproduction unit and the reproduction sequence.

28. The apparatus of claim 25, wherein when the storage medium comprises presentation data described using a markup language, the presentation data is read from the storage medium and output in a form of a menu screen representing a user interface.

29. A multimedia data recording apparatus recording multimedia data on a storage medium, the apparatus recording multimedia data on a first layer of the storage medium, dividing the multimedia data into a record unit and a reproduction unit, recording information and linkage information of the record unit and the reproduction unit using markup language, and storing the information and linkage information on a second layer of the storage medium, wherein the multimedia data comprises video object data, still image data, audio data, or graphic data.

30.   The apparatus of claim 29, wherein navigation data is recorded on a third layer of the storage medium to control a selection of the reproduction unit and a reproduction sequence.

31.   A multimedia data recording apparatus recording multimedia data in a storage medium, the apparatus recording multimedia data on a first layer of the storage medium, dividing the multimedia data recorded on the first layer into a record unit and a reproduction unit, recording information and linkage information of the record unit and the reproduction unit on a second layer in a table format, and storing navigation data in a third layer, wherein the multimedia data comprises video object data, still image data, audio data, or graphic data, and the navigation data controls a selection of the reproduction unit and a reproduction sequence.

32.   The apparatus of claim 31, wherein the navigation data is described using a script language that is interpreted and executed in units of lines.

33.   The apparatus of claim 31, wherein the navigation data is described using a markup language with timing and synchronization functions.

34.   The apparatus of claim 31, wherein presentation data is recorded on a third layer of the storage medium using a markup language, and the presentation data comprises a menu screen to select the reproduction unit or a screen layout to display the multimedia data.

35.   A multimedia data recording method recording multimedia data on a storage medium, comprising:
    storing the multimedia data in a first layer;
    dividing the multimedia data into a record unit and a reproduction unit; and
    providing a second layer describing with a markup language information of attributes of the record unit and a relationship between the record unit and the reproduction unit.

36.   A multimedia data recording method recording multimedia data on a storage medium, comprising:
    storing the multimedia data in a first layer;
    dividing the multimedia data into a record unit and a reproduction unit;
    providing a second layer describing in a table format information of attributes of the record unit and a relationship between the record unit and the reproduction unit; and

storing in a third layer navigation data of a selection of the reproduction unit and reproduction sequence.

37.   A multimedia data recording method recording multimedia data on a storage medium, comprising:

recording the multimedia data on a first layer of the storage medium;

dividing the multimedia data into a record unit and a reproduction unit;

recording information and linkage information of the record unit and the reproduction unit using markup language; and

storing the information and linkage information on a second layer of the storage medium, wherein the multimedia data comprises video object data, still image data, audio data, or graphic data.

38.   A multimedia data recording method recording multimedia data in a storage medium, comprising:

recording the multimedia data on a first layer of the storage medium;

dividing the multimedia data recorded on the first layer into a record unit and a reproduction unit;

recording information and linkage information of the record unit and the reproduction unit on a second layer in a table format; and

storing navigation data in a third layer, wherein the multimedia data comprises video object data, still image data, audio data, or graphic data, and the navigation data controls a selection of the reproduction unit and a reproduction sequence.